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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/051,547	04/07/1998	TAKAO YAMAGUCHI	MTS-2570	8127

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EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
2613	30

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/051,547

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-15,20,21 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-15,20,21 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/12/03 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 3-15, 20, 21, 24-26 and 27-31 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-15, 20, 21, 24-26 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lane et al. (5,377,051) and Clapp (4,562,466) in view of Caldara (5,822,540).

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Regarding claim 1, Lane discloses a picture coding and decoding apparatus comprising:

a picture coding apparatus including picture coding means of coding pictures and providing a picture identifier for each picture as an I, P or B picture (fig.8a, element 102 and col.25, lines 23-42, Lane discloses the identification of various data types and thus by identifying the various video data types, the picture coding method will be determined, thus, Lane discloses a picture identifier for each picture),

priority providing means of correlating each coded picture with a priority identifier which assigns a priority level to one or more frames of the coded pictures (col.25, line 54 to col.26, line 40; Lane discloses the prioritization scheme for each coded picture information with a priority identifier or "priority level" as shown in the table on col.6 where there are eight priority levels), and

transmission control means of transmitting or recording the coded pictures with the priority identifiers (note fig.8a, element 109 is a transport encoder that controls what is being transmitted and how the video data is prioritized, where element 105 is a prioritizer that prepares the pictures for transmission with priority identifiers); and

a picture decoding apparatus including reception control means of receiving or reading the coded pictures with the priority identifiers (fig.9b, element 208 is the transport and priority decoder where the coded pictures are received along with the priority identifiers, and that element 214 is the priority decoder that receives the priority identifiers),

picture decoding means of decoding the coded pictures with the priority identifiers (fig.9b, element 216 is the picture decoding means where the output of element 216 goes to a display circuit for sequentially viewing the decoded pictures since priority identifiers were taken into account, also, in col.35, ln.34-44, Lane discloses that the priority decoder 214 combines the data of various priority identifiers into a data stream of codewords that the element 216 can properly process for decoding), and

wherein said priority identifier is used by the picture decoding apparatus (note fig. 9B shows the "priority level" or priority identifier is used by the picture decoding apparatus 208, moreover, in col.35, ln.34-44, Lane discloses that the priority decoder 214 combines the data of various priority identifiers into a data stream of codewords that the element 216 can properly process).

Lane does not disclose the limitation of "determine whether each picture should be processed or not be processed according to a processing load or a processing capacity of the picture decoding apparatus, and each priority identifier is used independently of the picture identifiers and independently of whether the picture is an I, P or B picture." However, Clapp teaches the concept of determining whether frames should be discarded or not for maintaining sync between the transporting end and the receiving end (col.8, lines 56+; note the processing load or processing capacity of the decoder buffer is checked to determine whether it is appropriate to drop or discard frames regardless of the picture identifier or the picture type, thus I, P or B pictures can be discarded). Clearly, Clapp teaches this well known concept of discarding frames to maintain sync. Therefore, it would have been obvious to one of ordinary skill in the art

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to combine the teachings of Lane's system with the priority identifier with Clapp's data transmission/reception control system together as a whole for implementing picture processing according to the processing load of a terminal so as to prevent data overload on the receiving end so as to maintain a synchronous connection when receiving video information for display. Doing so would minimize data errors and discrepancies when viewing real-time video.

In regards to the new limitation "a decision to discard or not discard a picture is based on priority identifier", Lane discloses the use of a priority identifier (note fig. 9B shows the "priority level" or priority identifier is used by the picture decoding apparatus 208, moreover, in col.35, ln.34-44, Lane discloses that the priority decoder 214 combines the data of various priority identifiers into a data stream of codewords that the element 216 can properly process). Lane does not disclose a decision to discard or not discard a picture is based on priority identifier. However, Caldara teaches the decision to discard or not discard a picture is based on priority identifier (col.2, ln.19-31; Caldara discloses that frames can be marked for discard by prioritization of these frames to determine which frames are to be discarded, and col.3, ln.28-36, Caldara discloses the concept of prioritization levels of frames to be discarded). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Lane, Clapp and Caldara, as a whole, for utilizing a decision process of discarding frames based on priority so as to determine which frames should be discarded in order to improve image data transmission and coding/decoding efficiency.

Note claims 10, 12-15, 20, 21, 24-26 and 27-31 have similar corresponding elements.

As for claims 3-5 and 11, Lane discloses the prioritization of encoded video data (see col. 25 to col. 30 where Lane elaborates on the prioritization schemes, the details of how video data is prioritized, and the importance of prioritization).

Regarding claim 6, Lane discloses the determining of the priority depending on the execution rate (col.30, lines 46-50; note "3X" is the execution rate).

Regarding claims 7 and 9, Lane discloses the prioritization of intraframe coded pictures (see chart in col.30 where "intra-coded image" are prioritized at priority level 3-4).

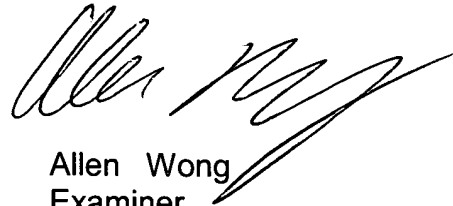
Regarding claim 8, Lane discloses the prioritization of interframe coded pictures (see chart in col.30 where "inter-coded image" are prioritized at priority level 5-7).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

A handwritten signature in black ink, appearing to read 'Allen Wong', with a long, sweeping horizontal stroke extending to the right.

Allen Wong
Examiner
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AW
12/3/03